IN THE U.S. PATENT AND TRADEMARK OFFICE

Applicant: Naruhisa Hirai

Appl. No.: 10/568,597 ART UNIT: 1624

Filed: February 17, 2006 Examiner: BALASUBRAMANIAN, VENKATARAMAN

For: PROCESS FOR PRODUCING N,N',N"-TRISUBSTITUTED ISOCYANURIC ACID

DECLARATION UNDER 37 C.F.R. 1.132

Assistant Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

I, Naruhisa HIRAI, a citizen of Japan and residing at c/o RESERCH CENTER, DAICEL CHMICAL INDUSTRIES, LTD., 1239, Shinzaike, Aboshi-ku, Himeji-shi, HYOGO 671-1283, declare and say that:

I was graduated from the Department of Materials Engineering Science, Graduate School of Engineering Science, JAPAN in 1995.

From April, 1995 up till the present, I have been engaged in development of novel organic compounds at Corporate R&D Center, Daicel Chemical Industries, LTD.

I am a member of The Chemical Society of Japan.

I am one of the inventors of the above-identified application and am familiar with the subject matter thereof.

I have read the Official Action mailed on September 22, 2006 and the references cited therein and am familiar

with the subject matter thereof.

I declare that the following experiment was performed under my direction.

EXPERIMENT:

After purging a 500-ml four-neck flask equipped with a condenser tube, thermometer, septum and rotor with nitrogen, 23.9 g (150 mmol) of O-benzylhydroxylamine hydrochloride, 26.8 g (165 mmol) of carbonyldiimidazole and 250 ml of tetrahydrofuran (THF) were placed, followed by stirring at 10°C in an atmosphere of nitrogen for 6 hours, to thereby yield 1-(N-benzyloxycarbamoyl)imidazole. The precipitated crystals were filtrated, the filtrate containing 1-(N-benzyloxycarbamoyl)imidazole was concentrated, and the resulting concentrate was reacted at 90°C for 60 minutes. After cooling, 100 ml of methanol was added thereto, followed by stirring for 0.5 hour. The crystals were filtrated and washed with 100 ml of methanol, followed by suction drying for 1 hour. The subsequent heating and drying at 80°C under reduced pressure for 12 hours yielded 7.0 g (yield: 31%) of N,N',N"-tris(benzyloxy)isocyanuric acid having a purity of 98% as white crystals.

[Spectral data of N,N',N"-tris(benzyloxy)isocyanuric acid]

$^{1}$H-NMR (DMSO-d6, 500 MHz) d: 5.11 (s, 6H, $CH_2$), 7.4-7.5 (m, 9H, ArH), 7.5-7.6 (m, 6H, ArH)

$^{13}$C-NMR (DMSO-d6, 125 MHz) d: 145.0, 133.6, 129.7, 129.2, 128.5, 78.5

MS ($FAB^+$) m/z 448 ($(M+H)^+$, 21), 371 (16), 181 (22), 129 (12), 91 (100), 57 (11)

I declare further that all statements made herein of my own knowledge are true and that all statements made on

information and belief are to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the above-identified application or any patent issuing thereon.

Signed this 21 day of December, 2006

Naruhisa Hirai

Naruhisa HIRAI